



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D350-636-011
Job Sheet 178942



Part No: D350-636-011

Job Qty: 1 ea

Part Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/11/18

Job Tracking No:

Due Date: 7/6/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: D2750-041 REV G SHEETS 1,2,4,8 IPP Rev:I 02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP Rev:K 06-07.13
As per dsI9343 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC IPP Rev:M 08-04-22 DD
verified:EC IPP Rev:N 08-09-23 revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-010 DD verf:EC IPP
Rev:P 10.06.22 revise seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH DDverf:EC IPP REV:R
13.08.27 PER ECN13-594 DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	7/6/18	7/6/18	0.00	0.00	Start Up Skidtubes-1		
110	Skidtubes	1 pcs	7/6/18	7/6/18	0.00	4.55	Skidtubes-4		
120	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC10		
130	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC5		
140	HandFinish	1 pcs	7/6/18	7/6/18	0.00	0.93	HandFinish1		
150	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC7-2		
160	Skidtubes	1 pcs	7/6/18	7/6/18	0.00	4.55	Skidtubes-4		
170	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC10		
180	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC5		
190	HandFinish	1 pcs	7/6/18	7/6/18	0.00	0.93	HandFinish2		
200	SprayPaint	1 pcs	7/6/18	7/6/18	0.00	0.91	Spray Paint		
205	Outsource	1 pcs	7/6/18	7/6/18			ATE003-VC		
210	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC14		
230	HandFinish	1 pcs	7/6/18	7/6/18	0.00	0.93	HandFinish4		
240	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC5		
250	Packaging	1 pcs	7/6/18	7/6/18	0.00	0.00	Packaging1-3		
260	QC	1 pcs	7/6/18	7/6/18	0.00	0.00	QC4		
270	Packaging	1 pcs	7/6/18	7/6/18	0.00	0.00	Packaging3-1		
275	DC	1 pcs	7/6/18	7/6/18	0.00	0.00	DC		
280	QC21-FG	1 Ea	7/6/18	7/6/18	0.00	0.00	QC21		

Part Op 110 - 1- Pick D2600-3 Bent 2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg
Descriptions: D2750-1 3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill
then ream holes using 0.500" reamer. PIN first side. Repeat process on second side. ***ENSURE PROPER
POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE*** Drill pilot holes as per Dwg D2750
sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for 2nd side only DT8863B for first side (detail B) 4-
Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY
AND RECORD FWD BEND ANGLE. 5-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".
6-Open up holes of Detail A to 0.297" (total of 2 holes per side) 7-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill
grooves in bend left from bending as per QSI 004 A/R Aluminum Rod batch: 138434 8-Grind welds flush as per Dwg
D2750
160 - 1-Open up holes using hole saw of Detail C and ground handling to 0.625" (total of 8 holes per side) as per dwg
D2750. 2-Open up holes using hole saw of Detail B to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐					
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Container No: S082895



Part: D350-636-011

Job No: 178942

Serial No/Batch: S082895

Revision:

Inspector:

Exp Date:

Instructions:

Date: 06/21/18

hole using un-bit to 0.500" (4 per side) 4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750 (welding instructions on sheet 8) 5-Debur and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7-Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: exp. date: ***ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 8) A/R Aluminum Rod batch: 138834 9- At section AJ-AJ drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11-Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12-Debur holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: 5084461 2-

PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 138886

210 - Inspect for foreign object per QSI 024

230 - 1- Install inserts as per Dwg D2750 2-Inspect for Foreign Objects 3- Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: M138283 EXP DATE: 18/12 4-

Assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: M13884 5- Coat all exposed fasteners with "LPS Procyon" batch: M133640

260 - *****ensure antiseize is on AN8C21A bolts*****

270 - Package as per PPP D350-636-011 Location : FG072

275 - record fwd angle: 90° Photocopy blue file and type labels per PPP D350-636-011 CHG 007

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-LH	Extrusion Bent LH	1 Ea (1 ea)	90-Start up Operation	5082073
D2744	Cap	1 Ea (1 ea)	110-Skidtubes	506862
D2739	350 I-Beam	1 Ea (1 ea)	160-Skidtubes	5081150
D2743	Crossbolt Spacer	8 Ea (8 ea)	160-Skidtubes	5082661
D3490-1	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5065863
D3490-3	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5066254
AN3C5A	Bolt	34 Ea (34 ea)	230-HandFinish	5057153
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	5076000
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	5066333-1
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	FM137203
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	5091819
D3488-041	Blade Fitting LH	1 Ea (1 ea)	230-HandFinish	X5092787
D3492-1	Plug	8 Ea (8 ea)	230-HandFinish	5077552
D3492-3	Plug	8 Ea (8 ea)	230-HandFinish	5091848
D3535-25	Wearplate Center	1 Ea (1 ea)	230-HandFinish	5080560
D3536-25	Gasket Center	1 Ea (1 ea)	230-HandFinish	5081781
D3537-1	Wearpad	3 Ea (3 ea)	230-HandFinish	5053117
D3631-1	Washer	8 Ea (8 ea)	230-HandFinish	5058407
D3791-1	Wearpad	1 Ea (1 ea)	230-HandFinish	5071379
D3793-1	Wearplate Fwd	1 Ea (1 ea)	230-HandFinish	5089345
D3793-3	Wearplate Aft	1 Ea (1 ea)	230-HandFinish	5089448
D3794-1	Gasket Fwd	1 Ea (1 ea)	230-HandFinish	5071975
D3794-3	Gasket Aft	1 Ea (1 ea)	230-HandFinish	5081738
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	5083535
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	5050046-1
NAS1149C0332R	Washer	38 Ea (38 ea)	230-HandFinish	5056493
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	M138409-121
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	5036710
NAS1611-010	O-Ring	8 Ea (8 ea)	230-HandFinish	5049970
NAS1611-013	O-Ring	8 Ea (8 ea)	230-HandFinish	5077835
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-HandFinish	5068138
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging	FM187162
D2741	Replacement Blade	1 Ea (1 ea)	250-Packaging	5068565
D3493-1	Washer	2 Ea (2 ea)	250-Packaging	5095455
D3532-1	Spacer	2 Ea (2 ea)	250-Packaging	5090421
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging	5050046
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging	F125635X2

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-LH	1	3	0

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Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER :																			

110-Skidtubes	D2744	1	77	0
160-Skidtubes	D2739	1	9	0
	D2743	8	78	0
	D3490-1	4	124	0
	D3490-3	4	103	0
230-HandFinish	ALS4-1032-225	38	4,690	0
	AN3C5A	34	1,863	0
	AN3C6A	4	432	0
	AN6C44A	4	323	0
	AN8C35A	1	55	0
	D2745	8	57	0
	D3488-041	1	13	0
	D3492-1	8	328	0
	D3492-3	8	159	0
	D3535-25	1	15	0
	D3536-25	1	22	0
	D3537-1	3	116	0
	D3631-1	8	875	0
	D3791-1	1	27	0
	D3793-1	1	20	0
	D3793-3	1	20	0
	D3794-1	1	46	0
	D3794-3	1	20	0
	MS21043-6	4	208	0
	MS21083C8	1	109	0
	NAS1149C0332R	38	5,937	0
	NAS1149C0832R	1	447	0
	NAS1515H3L	4	171	0
	NAS1611-010	8	509	0
	NAS1611-013	8	405	0
250-Packaging	AN8C21A	2	102	0
	D2741	1	78	0
	D3493-1	2	43	0
	D3532-1	2	26	0
	MS21083C8	2	109	0
	NAS1149D0863J	2	93	0

Part Specifications

Specifications could not be found.

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QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C4A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
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2013-08-13
WD

G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS $+0.010/-0.000$, WAS $+0.100/-0.000$ (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-14/-9/-6/-7); UPDATED FINISH OPTIONS: INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN AG-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515HBL; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DED 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.07.11		

DART AEROSPACE USA, INC.

KENT, WA

DRAWING NO.

D2750

REV. G

SHEET 1 OF 11

TITLE

350 SKIDTUBE ASSEMBLY

SCALE

NTS

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DQA: _____ Date: _____

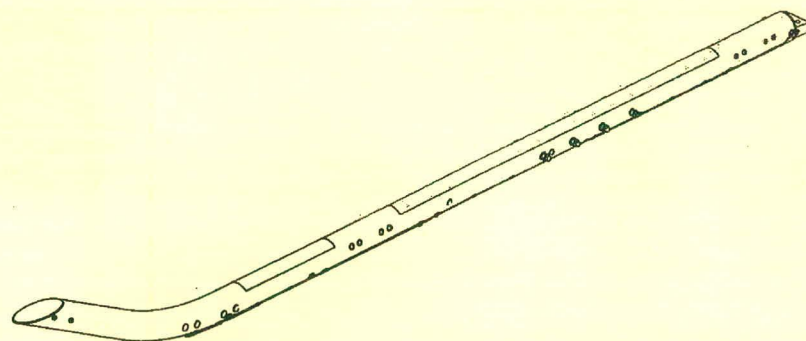


WORK ORDER NON-CONFORMANCE / UPDATE

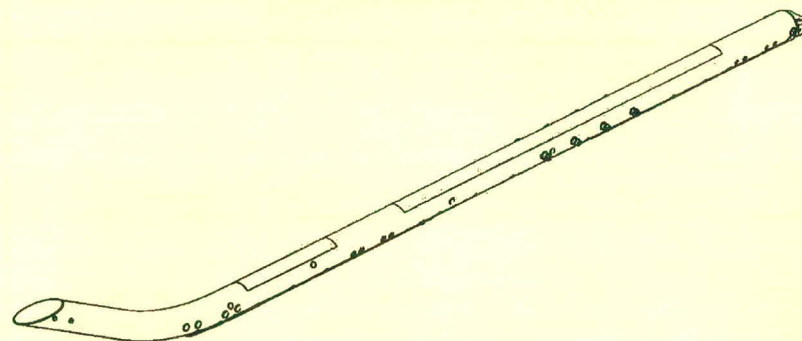
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

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DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO. D2750	REV. G
MFG. APPR.		TITLE	SHEET 2 OF 11
APPROVED		350 SKIDTUBE ASSEMBLY	SCALE
DE APPR.			NTS
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DQA: _____ Date: _____



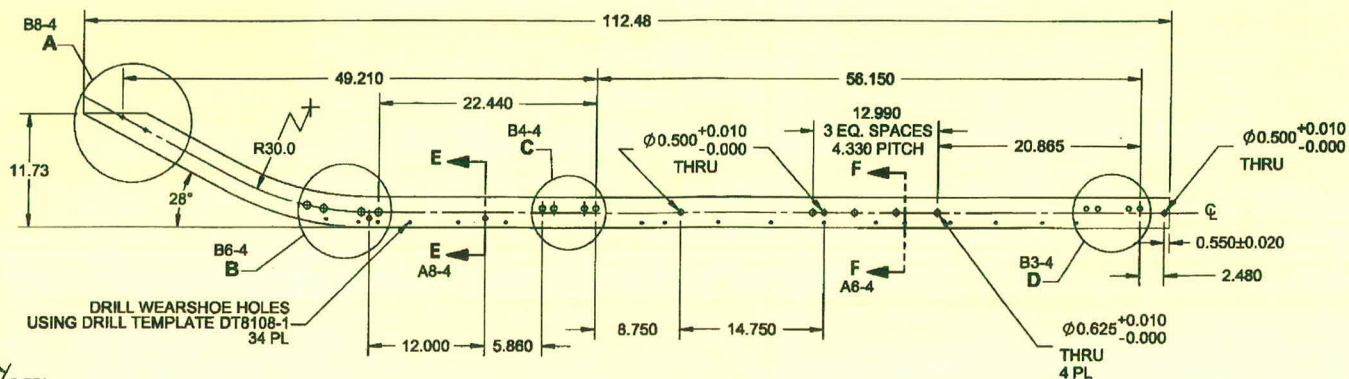
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

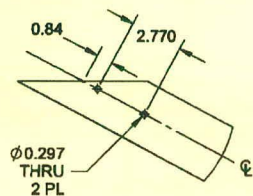
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

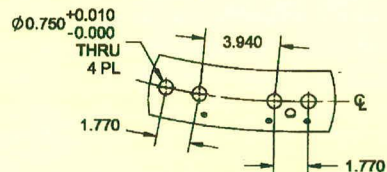
8 7 6 5 4 3 2 1



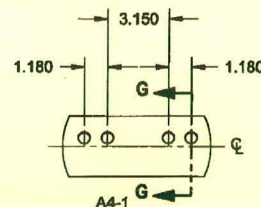
D2750-1 LH SKIDTUBE



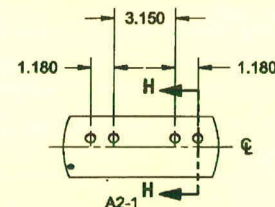
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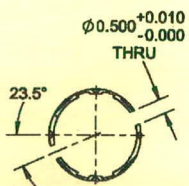
DETAIL B
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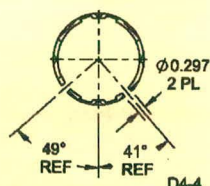
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SCALE 2X



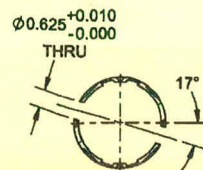
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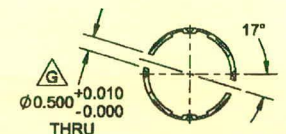
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

DESIGN	MM
DRAWN	
CHECKED	
MFG. APPR.	
APPROVED	
DE APPR.	
DATE	13.07.11

DART AEROSPACE USA, INC.	
KENT, WA	
DRAWING NO.	REV. G
D2750	SHEET 4 OF 11
TITLE	SCALE
350 SKIDTUBE ASSEMBLY	NTS
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RELEASED
2013-08-13

8 7 6 5 4 3 2 1

DQA: _____ Date: _____

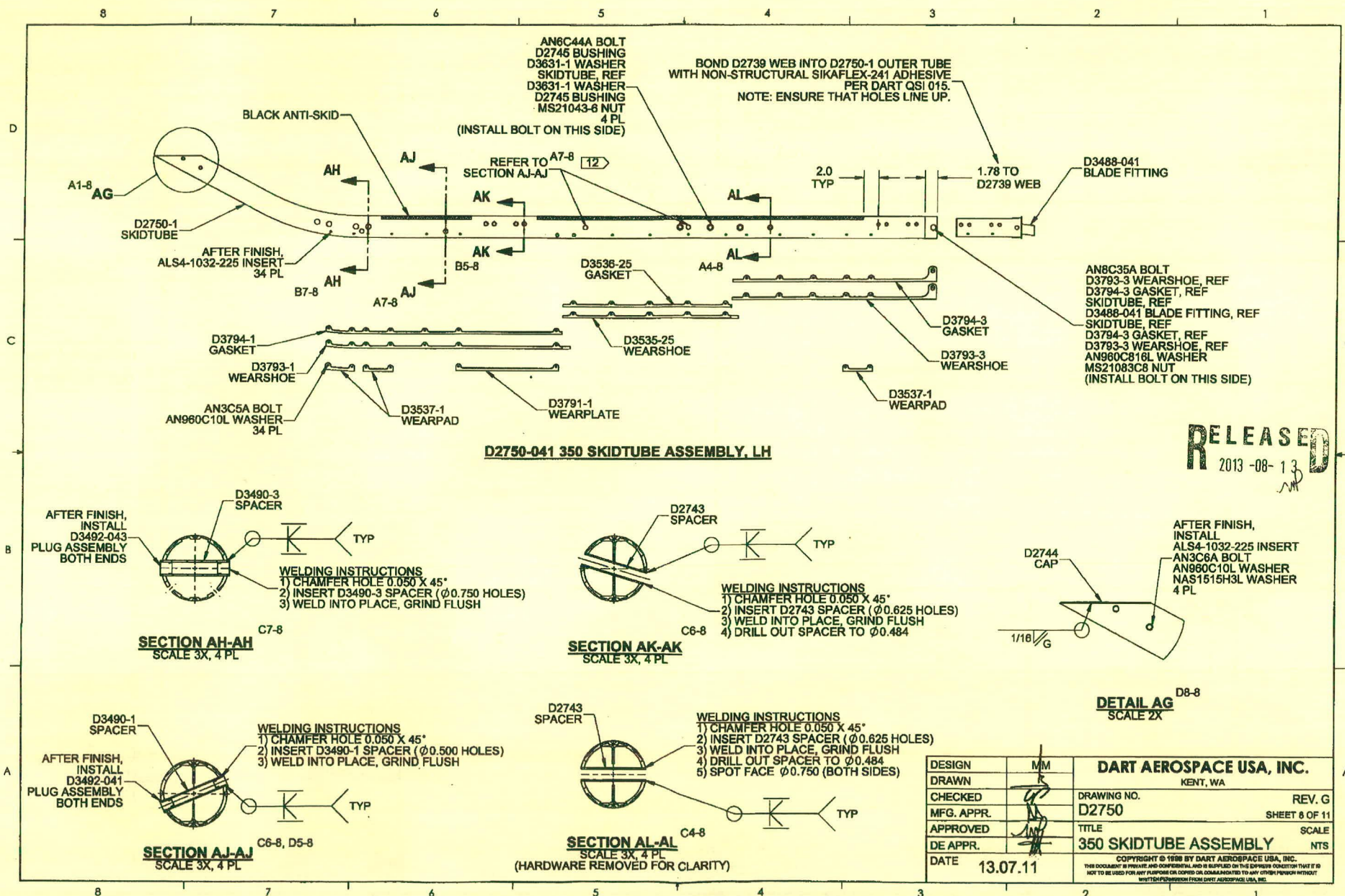


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS							
	Rework	☐	Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
	Scrap	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐
	Use-as-is	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
	Suspected Unapproved	☐	Large Fab	☐	Composite	☐	Supplier	☐		

Date : _____	Step #: _____	QTY Effective : _____	MRB (QSI042) Approval
--------------	---------------	-----------------------	-----------------------

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause			FAULT CATEGORY		
Environment	☐	No Re-verification	Pressure/Forced	☐	Temperature/Cure
Design	☐	Operator	Bending	☐	Set-up
Doc/Data	☐	Offset/Setup	Centre Not Concentric	☐	BOM/Route
Equip/Tooling	☐	Supplier	Cracks	☐	Broken/Damage/Defect
Handling/Pre	☐	Training	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified
Material	☐	Use for Testing	Cuffs	☐	Contamination
Internal Transport	☐	Poor Information	Crushing	☐	Countersink
Tribal Knowledge	☐	Rushing	Heat Treat	☐	Cut Too Short
LOA	☐	Product Improvement	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear
Substation	☐	Process Improvement	Marks/Chatter	☐	Drill Holes
Past Expiry Date	☐	Manufacturing Process			
Misidentified	☐	Past Due	OTHER :		